

DETAILED ACTION

This office action is in response to the amendment filed on 7/24/08. The amended drawings have been accepted.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1 and 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art in Figure 1 in view of Apprich (US 6,216,393**

B1). The prior art in Figure 1 discloses a drive for a sliding door or a swinging-sliding door of a rail vehicle comprising a guide rail fixed with respect to the rail vehicle (1), a carriage longitudinally displaceable on the guide rail and carrying a door leaf (2), a spindle drive including a spindle which extends parallel to the guide rail (3) and a spindle nut which is fixedly connected with the carriage in the direction of the axis of the spindle (4), but does not disclose a sliding hinge joint. However, Apprich discloses a sliding joint (15, Fig. 6) that permits relative rotating movement as well as displacing movement at the joint area. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have modified the prior art to include a sliding hinge joint as taught by Apprich. The motivation for doing so would be to reduce the number of parts and fatigue on the parts.

Regarding claims 3-6, Apprich discloses the abutment includes a bolt (16, Fig. 6) extending parallel to the guide rail (9, Fig. 6); **[claim 4]** wherein mutually facing surfaces of the components of the sliding hinge joint, which extend perpendicular to the guide rail, have a distance from one another which is closed by shims (17, Fig. 6); **[claim 5]** wherein the sliding hinge joint includes the spindle nut (18, Fig. 6) and a cover which is slidable with respect to the spindle nut in a plane perpendicular to the axis of the spindle (17, Fig. 6); **[claim 6]** wherein the ends of the cover have passage holes parallel to the axis of the spindle and a bolt (16, Fig. 6) extends through the passage holes (11, Fig. 6).

Regarding claim 7, Apprich discloses a cover (17) but does not disclose it consisting of a piece of sheet metal and is bent around the spindle nut. However, It would have been obvious matter of design choice to bend the sheet metal around the nut, since applicant has not disclosed that doing so solved any stated problem or is for any particular purpose and it appears that the invention would perform equally well with Apprich's invention.

3. **Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art in Figure 1 and Apprich (US 6,216,393 B1) as applied to claim 7 above, and further in view of Carlsson et al. (US 6,792,717 B2).** The applicant's admitted art and Apprich discloses the invention as set forth, but does not disclose the spindle nut having ribs in planes perpendicular to the axis of the spindle which ribs project into indentations or holes of the cover. However, Carlsson et al. disclose a vehicle door that has wheels (74,75, Fig. 8) that are project into indentations

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(59, lines 25-27, Column 5). Although Carlsson et al. disclose wheels, it would have been an obvious matter of design choice to include ribs, since applicant has not disclosed that having ribs solves any stated problem or is for any particular reason and it appears that the invention would perform equally well with Carlsson et al.'s invention. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have modified the cover as taught by Carlsson et al. The motivation for doing so would be to restrict the movement of the sliding hinge.

4. **Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art in Figure 1 and Apprich (US 6,216,393 B1) as applied to claim 1 above, and further in view of Fisher et al. (US 4,329,917).** The prior art and Apprich disclose the invention as set forth except for the radially projecting ends that rotate about the abutment and simultaneously the abutment is displaced in the radially direction with respect to an axis of the spindle. However, Fisher et al. disclose an abutment (40) that is displaced by radially projecting ends (36, Fig. 4) that rotate about it. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have modified the invention to include radially projecting ends to displace the abutment. The motivation for doing so would be to create a spindle nut that can rotate about the abutment.

Regarding claim 9, Fisher et al. disclose the radially projecting ends of the nut are claw shaped (36, fig. 4).

Response to Arguments

5. Applicant's arguments with respect to claims except 2 and 9 have been considered but are not persuasive. Applicant argues that Apprich (US 6,216,393 B1) does not disclose displacement and rotation at the joint, but at the free end. However, the joint area (14) is also displaced since the wall (4) is stationary and the door (3) is moved away from the stationary wall. Therefore, not only does the joint rotate, but it is also displaced.

6. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant's arguments with respect to claims 2 and 9 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Tang whose telephone number is (571) 270-5223. The examiner can normally be reached on Monday-Friday 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Katherine Mitchell can be reached on (571) 272-7069. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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